

For Internal Use Only
Gold King Mine Release
EPA Executive Summary*: August 13, 2015 1200

Situation Summary

EPA Unified Area Command (AC) was established in Durango, CO and is comprised of EPA Regions 6, 8, and 9. An initial teleconference was conducted with Incident Commanders and the Area Command Guide was promulgated and disseminated to ICPs.

Highlights, Key Updates/ Changes

- ☐ The AC hosted a visit from the EPA Administrator.
- ☐ The Area Commander and the Administrator conducted a media press conference and met with local and state elected officials.
- ☐ The Incident Hotline was implemented and 38 calls were received from all 3 Regions.

Area Command Emphasis

For the next operational period, the AC will establish reporting schedules for situational reports and data. The Area Command will also optimize data validation, approval, and dissemination.

*Note: This summary is a duplicative of Summary provided on 8/12/2015 to sync with ICP Sit Reports.

**U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
2015 Gold King Mine Release SITREP**



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 8**



Subject: SITREP #4
Gold King Mine Release

San Juan County, Colorado
Latitude: 37.8945 Longitude: -107.6384

From: R8 IMT Situation Unit

Date: 08/12/2015

Reporting Period: 08/11/15 through 08/11/15

Website: epa.gov/goldkingmine

Executive Summary

On August 5, while investigating the Gold King Mine in Colorado, an EPA cleanup team triggered a release of mine wastewater into Cement Creek. The EPA is working closely with responders and local, state and tribal officials to monitor water contaminated by the release. The release's path flows through three of the EPA's regions - Region 8 (Colorado, Utah, Southern Ute Tribe, and Ute Mountain Ute Tribe); Region 6 (New Mexico), and Region 9 (Navajo Nation). EPA has activated its Emergency Operations System to ensure coordination among its regions, laboratories and national program offices in Washington, D.C. The EPA has also set up an incident command center in Durango, CO. The EPA is coordinating with officials in Colorado, New Mexico, Utah, Southern Ute Tribe and Navajo Nation and the Ute Mountain Ute Tribe.

1. Introduction

1.1 Background

| | |
|--------------------------------------|-------------------------------------|
| Site Number: A8K9RV | Contract Number: |
| D.O. Number: | Action Memo Date: |
| Response Authority: CERCLA | Response Type: Emergency |
| Response Lead: EPA | Incident Category: |
| NPL Status: not listed | Operable Unit: |
| Mobilization Date: 08/05/2015 | Start Date: 08/05/15 |
| Demob Date: TBD | Completion Date: |
| CERCLIS ID: | RCRIS ID: |
| ERNS No.: | State Notification: 08/05/15 |

The La Plata County Sheriff issued an order closing the Animas River to all watercraft from the north County line (San Juan County, Colorado) to the south County line (at the Colorado/New Mexico State line) until further notice. Furthermore, all such watercraft must be removed from the Animas River within the locations cited above. The decision was made after consultation with the EPA, CDPHE, the San Juan Basin Health Department, and representatives of the Southern Ute Indian Tribe. The order will remain in effect until it is determined that the river is safe

1.1.1 Incident Category

1.1.2 Site Description.

The Gold King Mine near Silverton, Colorado is a historic gold mine at approximately 11,300' elevation. The mine has a continuous discharge of acidic mine drainage that is a significant contributor of manganese, zinc, copper, and cadmium into the Cement Creek drainage of the Animas River watershed. The Gold King Mine has not had maintenance of the mine workings since 1991, and the workings have been inaccessible since 1995 when the mine portal collapsed.

The EPA Region 8 has been investigating the conditions to assess the on-going releases and incremental de-watering and removal of blockages to prevent blowouts.

1.1.2.1 Location - San Juan County, Colorado, La Plata County, Colorado, Southern Ute Indian Reservation and Ute Mountain Ute Tribe reservation.

1.1.2.2 Description of Threat

Mine waste water was released into Cement Creek and the Animas River. The volume of the release based on US Geological Survey (USGS) Cement Creek gaging station is estimated at three million gallons. The initial environmental concern was the pulse of contaminated water containing sediment and metals discharged in Cement Creek which flows into the Animas River through Durango, Colorado, and into New Mexico where it joins the San Juan River before flowing into Utah. The City of Durango relies on the Animas River as one of its main water sources - the Animas source is off-line. The river is also used for recreational purposes, including fishing and rafting, and is an important cultural resource for the Navajo Nation.

The leading edge of the release passed through Durango, Colorado, on Friday, August 7, 2015, and on August 8, 2015, it crossed the border into New Mexico where it eventually discharged into the San Juan River.

1.1.3 Site Inspection Results

Aerial and ground reconnaissance indicates that the plume associated with the Gold King Mine release has dissipated downstream and there is no leading edge of contamination visible in downstream sections of the San Juan River or Lake Powell.

The EPA is collecting and assessing water quality from Cement Creek and the Animas daily. Water sampling is occurring, and pH levels and dissolved concentrations of metals are being monitored.

1.2 Incident Objectives

- Continue private water well call tracking, follow up actions and owner communications.
- Continue sampling plan and develop strategy to mitigate risks due to sediment in the river.
- Continue river assessment through sediment and water sampling.
- Continue management of adit discharge and develop call down verification (CDPHE).
- Effectively communicate with public and stakeholders utilizing a multi-faceted communication strategy to dissemination results.
- Ensure health and safety of the public and response management personnel.
- Develop a means to assess the economic impact upon affected communities
- Coordinate with the Colorado Division of water and other stakeholders to assess and begin flushing ditch status
- Provide water of appropriate quality for specified use.
- Develop Veterinarian Consortium, including Colorado Extension.
- Continue to treat water at the mine.
- Stabilize mine road to ensure access 8/12/15.
- Prepare for mine dump stabilization.

- Continue adit discharge management, treatment and sampling.

1.3 Critical Resource Needs

All resources are being tracked by the Resources Unit. Resources for the response continue to be ordered as needed to fill critical resource needs.

1.4 Strategic Considerations

United group of specialist to advise policy makers.

2. Current Activities

2.1 Operations Section

2.1.1 Response Actions to Date

A Unified Command (UC) post in Durango was established on 8/7/2015 and expanded on 8/10/2015 to full staff levels. An Area Command was also moved to Durango on 8/10/15. The UC includes EPA, State of Colorado Office of Emergency Management (OEM), Southern Ute Indian Tribe, La Plata County, San Juan Basin Health Department. The Ute Mountain Ute Tribe will likely join during the next operational period. The EPA Regions 6 and 9 have established incident command posts in Farmington, New Mexico that cover New Mexico and the Navajo Nation response areas.

The EPA initiated a water quality sampling effort on August 5, 2015, to assess the impacts of the release at the Gold King Mine. There were a total of 5 sampling teams deployed on Monday, 8/10/2015, three from the EPA Region 8 and two from Colorado Department of Health and the Environment (CDPHE). There were four river and 30-40 well water samples collected August 10, 2015. The EPA collected surface water quality samples from seven locations; two of these locations were on Cement Creek, and five of these were on the Animas River in Colorado. Well samples were also collected upon request. These locations were selected based on the availability of an historical dataset for these locations. These analysis of these samples include pH, dissolved concentrations of metals, and operational milestones. The CDPHE collected samples from raw and finished drinking water supplies and water samples from the northern segment of the Animas River.

On Tuesday, samples from 19 of the 20 planned sediment sampling locations were completed by the EPA (contractor) sampling teams. Daily residential sampling is occurring. As of 6pm on 8/11/2015, 226 requests had been received. There were 20 private drinking water samples taken on 8/11/2015 with a total 49 of through the end of 2/11/2015. Bottle water shipments from local suppliers have been occurring daily and distributed as requested.

Non-Potable water distribution as of 8-11:

Total deliveries: 16

26,220 Gallons

Stakeholders:

- Cattle & Horse Farms
- Nursery

- Fish Hatchery/Fish Ponds
- Commercial organic produce farm

Potable Water Delivery as of 8-11:

Total Deliveries: 6

19,200 gallons

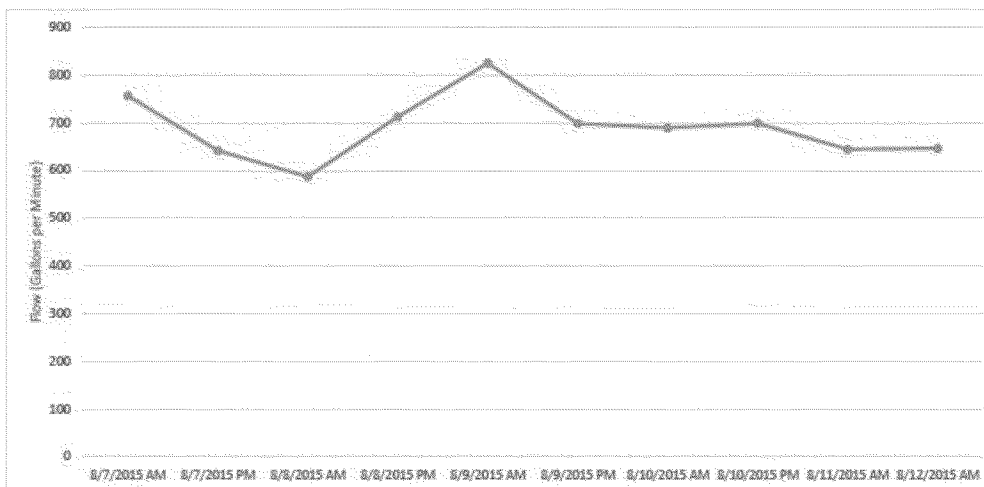
Stakeholders:

- Single Family Home cisterns.
- Multiple family homes on neighborhood cistern.

224 cases of bottled water have been purchased to hand out to community.

CDPHE continued watershed sampling on Animas River taking samples at four points including one location upstream of where Cement Creek discharges into the Animas. Staff of CDPHE also visited Gold King Mine site portal and water treatment facility and Red Bonita Mine site with the EPA and Southern Ute Tribe representatives. Public water systems regulated by CDPHE in the impacted area are taking raw and finished water samples to monitor water quality. CDPHE is coordinating with City of Durango drinking water treatment staff regarding the Animas River intake. It was not in use at the time of the event and has been off-line pending water quality assessment with CDPHE. Some sediment sampling was also performed.

The EPA continues to operate four treatment and sedimentation ponds at the mine site which are treating water by lowering acidity levels and removing dissolved metals. Flow from the mine through the morning of 8/12/2015 is shown in the following chart.



Treated water from the last treatment pond is discharging into Cement Creek at levels cleaner (higher pH and lower levels of metals) than pre-event, background conditions in the creek. Over the next several days, the EPA will make upgrades to the system to ensure its continued operation. Flow data out of the mine is being collected manually two times per day. Water quality data is being collected at the influent and effluent of the treatment

system as well.

ASPECT aerial flyovers and ground reconnaissance indicates that the plume associated with the Gold King Mine release has dissipated downstream and there is no leading edge of contamination visible in downstream sections of the San Juan River or Lake Powell.

Colorado Parks & Wildlife officials have been monitoring the effects of the spill on terrestrial & aquatic wildlife since the incident began. To date we have seen no indication of widespread fish mortality in the Animas or San Juan. Fish cages placed directly in the Animas River by the State of Colorado Division of Parks and Wildlife (CDPW) for two days indicate one mortality out of 108 fish tested. CDPW pulled the fish from the Animas on 8/11/2013 and they were preserved for necropsy and toxicity (tissue analysis). There was no additional fish mortality after the initial one fish mortality. The state of Utah has been sampling along the San Juan River in proximity to Lake Powell.

2.2.1 Anticipated Activities

There will be seven sample teams, five from the EPA and two one-person teams from CDPHE. Sampling of the seven data points on the river will continue. A pilot test flush of the Animas Consolidated Ditch is scheduled for 8/12/2015. A system to prioritize and track water well sampling is going to be developed. Durango area operations are focusing on the ditch and water survey work.

Sampling procedures and a sampling plan are being established and shared with all relevant parties to ensure consistency.

The EPA Region 8 is distributing bottled water to citizens, and both potable and non-potable water for livestock and other agricultural purposes, as needed.

The EPA Region 8 is coordinating with Agency for Toxic Substances and Disease Registry (ATSDR) in response to public health concerns/questions associated with the mine waste plume. ATSDR has been in communication with local health officials at San Juan County Basin Health Department in Colorado. Public health questions should be directed to Chris Poulet, ATSDR.

2.2.1.2 Next Steps

2.2.2 Issues

2.3 Logistics Section

The UC was moved to the County fairgrounds the evening of 8/10/2015.

2.4 Finance Section

2.4.1 Narrative

The UC in Durango includes Finance section personnel and this will be updated in the next report.

2.5 Other Command Staff

2.5.1 Safety Officer

Anyone (visitors or IMT staff) who plans to visit the mine are to have personal protective equipment with them. Visitors who are “touring”, are currently required to wear a hard hat, safety shoes, safety vest as well as safety shoes

2.5.2 Liaison Officer

The Colorado Fish and Wildlife Conservation Office is monitoring effects on wildlife and aquatic life in the affected area.

The EPA Region 8 has contacted the US Fish and Wildlife Service and the US Department of Interior about the incident, and is working with the US Geological Service on water flow data in Cement Creek and the Animas River.

2.5.3 Information Officer

A last press release done on August 10, 2015.

2.5.4 Weather Forecast

Weather forecast for Tuesday, August 12, 2015:

DURANGO AREA

Today

Isolated showers and thunderstorms after 2pm. Mostly sunny, with a high near 83. Southeast wind 5 to 10 mph becoming south southwest in the afternoon. Chance of precipitation is 10%.

Tonight

A 10 percent chance of showers and thunderstorms before 7pm. Partly cloudy, with a low around 54. West southwest wind 5 to 10 mph becoming north northeast after midnight.

Thursday

A 20 percent chance of showers and thunderstorms after 1pm. Mostly sunny, with a high near 85. Light and variable wind becoming west 5 to 10 mph in the afternoon.

Thursday Night

A 10 percent chance of showers and thunderstorms before midnight. Partly cloudy, with a low around 55. West northwest wind around 10 mph becoming north northeast after midnight.

SILVERTON AREA

This Afternoon

Scattered showers and thunderstorms. Mostly cloudy, with a high near 69. South wind around 10 mph. Chance of precipitation is 40%.

Tonight

A 30 percent chance of showers and thunderstorms,

mainly before 8pm. Partly cloudy, with a low around 43. South southwest wind 5 to 10 mph becoming light and variable in the evening.

Thursday

A 40 percent chance of showers and thunderstorms, mainly after 11am. Partly sunny, with a high near 67. Calm wind becoming west southwest around 5 mph in the afternoon.

Thursday Night

A 30 percent chance of showers and thunderstorms before midnight. Partly cloudy, with a low around 43. Northwest wind 5 to 10 mph becoming east in the evening.

3. Participating Entities

3.1 Area Command

The EPA Region 8 is coordinating with the EPA Regions 6 and 9, the states of Colorado and Utah, the Southern Ute Tribe and the Ute Mountain Ute Tribe. The EPA Region 6 is working closely with the New Mexico Environment Department (NMED) to evaluate possible impacts in Mexico. The EPA Region 9 is working with the Navajo Nation to evaluate possible impacts to the Tribe. Potentially impacted water systems have been notified, and precautions are in place to ensure drinking water is protected. The EPA and NMED are providing assistance to community water systems and closely monitoring the situation.

The EPA Region 9 has contacted the Bureau of Indian Affairs regarding potential impacts to the Navajo Nation.

3.2 Unified Command and Cooperating Agencies

The UC includes EPA, State of Colorado Office of Emergency Management (OEM), Southern Ute Indian Tribe, La Plata County, San Juan Basin Health Department. The Ute Mountain Ute Tribe will likely join during the next operational period.

The City of Durango is involved through an agency representative. San Juan County is an Agency Administrator.

The CDPHE is collecting samples as noted above and sending the samples to their lab in Denver for expedited analysis.

4. Personnel On Site

| Gold King Mine Release 2015 | |
|------------------------------|------------|
| | 08/11/2015 |
| Group | Number |
| EPA @ REOC | 13 |
| Contractors @ REOC | 2 |
| EPA in Field (R8) | 23 |
| Contractors in Field (R8) | 12 |
| EPA Laboratory | 8 |
| Contractors Laboratory | 7 |
| USCG | 10 |
| ERT | 1 |
| Total EPA Region 8 Resources | 76 |

5. **Definition of Terms** - No information available at this time.

6. **Additional sources of information** – epa.gov/goldkingmine

7. **Situational Reference Materials** - epa.gov/goldkingmine

**U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Gold King Mine Spill - Region 6**



EPA staff meeting with NMED Administrator Flynn

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region VI**

**Subject: POLREP #6
Gold King Mine Spill - Region 6**

**Various New Mexico locations, NM
Latitude: 36.8374600 Longitude: -107.9916800**

From: Ronnie Crossland, Region 6 Regional Incident Commander (RIC)

Date: 8/13/2015

Reporting Period: 8/12/2015 0700 – 8/12/2015 1900

1. Introduction

1.1 Description of Threat

Region 8 reported approximately three million gallons of mine waste water was released into Cement Creek and the Animas River. The primary environmental concern is the pulse of contaminated water containing sediment and metals flowing as an orange-colored discharge downstream through Durango, Colorado, and into New Mexico and Utah.

1.2 Preliminary Removal Assessment/Removal Site Inspection Results

Water monitoring and sampling is ongoing at public water supply intakes and private wells and field pH levels and other water quality parameters are being monitored.

2. Current Activities

Headquarters has established a joint website at www.epa.gov/goldkingmine.

Created a new general public call-in number for Regions 6, 8, and 9: 844 – 607 – 9700.

2.1 Operations Section

Validated lab data from August 8, 2015, pre and post slug surface water samples has been received. The results indicate the concentration of metals in the river do not appear to cause harm to aquatic life, livestock, crops and people using the river for recreation activities.

The Region 6 IC has requested deployment of an ATSDR representative to assist in answering resident's questions regarding public health. The representative arrives in Farmington, NM on August 13, 2015.

The R6 REOC completed the community outreach package and mailed copies to R6 Incident Command in Farmington for distribution to residences where private wells are sampled, at community meetings and to the County Fair.

On August 12, 2015, the toll-free call-in number received 52 inquiries, of those 12 dealt directly with Region 6. Regions 6, 8 and 9 will coordinate responses to these calls.

Private Drinking Water Well Sampling

EPA amended the draft Sampling Plan on August 12, 2015 to incorporate NMED's additional sampling requests and provided a draft copy to NMED.

Wells/Ex. 9

EPA staff assisted NMED in analyzing the water samples local residents brought to the San Juan County fair. It is estimated that 500 samples have been received by the state mobile lab.

Surface Water and Sediment Sampling

EPA collected 9 surface water and sediment samples from the public drinking water intake locations on August 12, 2015. EPA added cyanide to the list of analytes for August 12, 2015 only. It is EPA Region 6's understanding that cyanide has not been a contaminant of concern at this site. The State requested that EPA test for cyanide for one day to confirm that cyanide is not an issue.

All the sample locations on August 11, 2015 had pH levels within the pH range specified by the State of New Mexico.

Agriculture and Livestock Water

On August 12, 2015, EPA delivered 178,401 gallons to eight locations for agriculture and livestock needs. We have made 12 water deliveries, totaling 226,071 gallons. The limiting factor is the number of available trucks. We estimate 13 available trucks by the end of the week. San Juan County is coordinating loading points and logistics for staging and scheduling the trucks.

Bids are being received to deliver water from the San Juan River to the north side of the Animas River for agricultural and livestock use. This will serve 25% of the area's irrigation needs.

Drinking Water Systems Update

Based on conversation with the State of New Mexico and drinking water systems on August 12, 2015, the following is the list of affected water systems and their status:

| System Name | Population | # Days Water Available |
|---------------------------------|-------------------|-------------------------------------|
| Aztec Domestic Water System | 6800 | 10 days |
| Farmington Water System | 47000 | 60 days |
| Lower Valley WUA | 8428 | 6 days |
| Morningstar Water Supply System | 6423 | 10 days |
| Northstar WDWCA | 4123 | 30 days |
| Southside Mutual Domestic | 1593 | 3 - 5 days/get water from Aztec |
| Upper La Plata WUA | 2265 | Get water from Aztec and Farmington |
| Flora Vista | 4300 | 1 day/get water from Aztec |
| Total Population | 80,392 | |

2.2 Finance Section

Daily Cost Estimates Report

| Funding Source | EPA Expended Payroll | EPA Expended Travel | Contract Costs | TOTAL Expended | Estimated Daily Burn Rate |
|-----------------------|-----------------------------|----------------------------|-----------------------|-----------------------|----------------------------------|
| EPA | \$97,590 | \$23,350 | \$388,600 | \$509,540 | \$148,300 |

3. Participating Entities in Region 6

US EPA
USFWS
NMED
ATSDR
NM Department of Health
NM Office of the State Engineer
NM Department of Game and Fish
County of San Juan – New Mexico

4. Personnel

| Group | Number |
|--|--------|
| Region 6 EPA @ REOC | 20 |
| Region 6 Contractors @ REOC | 4 |
| | |
| Region 6 Staff in JIC – Durango, CO | 1 |
| Region 6 Staff in Area Command – Durango, CO | 1 |
| Region 6 RIC – Farmington, NM | 1 |
| Region 6 Logistics – Farmington, NM | 1 |
| Region 6 Water Liaison – Santa Fe, NM | 1 |
| Region 6 EPA OSC | 4 |
| Region 6/7 Water Technicians | 12 |
| Region 6 Contractors in Field | 32 |

Region 9 SITREP
August 12, 2015, 2151 Hours

Regional Activities

Operations:

Water Sampling Branch

- Six Region 9 START team members supported surface water and sediment sampling at 11 location along the San Juan River.
 - In total, 11 surface water investigative samples and 2 duplicate surface water samples were collected. Sediment samples were additionally collected from each location from surface sediments (~0 - 2" below surface) for a total of 12 samples (11 investigative and 1 duplicate).
- START drafted a comprehensive site-specific HASP which address the impending boat ops.
- Preliminary data was received and validated for surface water samples collected on 8/9/15 (see Sample Summary Table). Data will be processed and made available for review on 8/13/15.

Water Distribution and Transportation Branch

- ERRS procured 10 water trucks for delivery of needed water to local farmers for livestock.
- ERRS is working to procure alfalfa for delivery to local farmers for livestock.

Community Relations Branch

- Shiprock Chapter Meeting Recap: EPA Staff Randy Nattis, Secody Hubbard, David Yogi, and Dan Heisner participated in a special meeting held at the Shiprock Chapter House from 15:00-19:00. The meeting was attended by approximately 450 residents. Scope of presentation, delivered by Secody and Randy, focused on what EPA R9 were doing to assess contaminants in the river and how we wanted to hear from the community about water needs so we can assist. Randy and Secody were commended by the Shiprock chapter president, and thanked by the area director of BIA, and New Mexico State Assembly Representative Sharon Chilleage for their presentation. National Public Radio, Gallup Independent newspaper attended.
- KNDN AM 960 Radio: Randy Nattis delivered remarks in an open mic format over Navajo AM radio KNDN before his presentation before the Shiprock Chapter. Remarks consisted of the content of the presentation delivered to the Shiprock Chapter meeting attendees.
- Fact Sheet on Region 9 Response Activities: EPA R9 staff in Region 9 have completed a draft of text to be included in a factsheet encompassing EPA R9's response activities along the San Juan River.
- Two Public Presentations Scheduled for Friday: EPA R9 staff will present the status of Region 9 response activities to sample the San Juan River and provide water services at two public meetings on Friday, August 12 at Aneth Chapter and Oljeto Chapter to residents.

Personnel:
EPA: 2 OSCs, 2 CICs

USCG: 7 PST

Contractors: 6 START, 2 ERRS